

Amendments to the Claims:

Please cancel claim 21. The remaining claims 1 - 20, 22, and 23, with prior amendments incorporated therein, now appear as shown on the following pages:

1. (Previously amended) A self-powered, wearable personal air purifier comprising:
 - a) a main frame;
 - b) an air conduit disposed in a longitudinal direction along said main frame and having an air inlet and an air outlet;
 - c) a multiplicity of air filters disposed transversely across said air conduit;
 - d) a HEPA filter disposed transversely across said air conduit;
 - e) one or more fans disposed transversely across said air conduit;
 - f) a power source electrically connectable to said one or more fans;
 - g) an airtight cover disposed around said air conduit exclusive of said air inlet and said air outlet;
 - h) an air blocking sheet disposed over said air conduit in forced contact therewith, wherein an inward pressure is applied to said air blocking sheet by the stretching of said air blocking sheet over a set of walls surrounding said air conduit; and
 - i) body attaching means by which said air purifier is removably attachable to an animal body, including humans.
2. (Original) The air purifier of claim 1 wherein said multiplicity of air filters is disposed across said air conduit in a pre-selected sequence adapted to target specific air pollutants that have been identified as being particularly dangerous to human health.
3. (Original) The air purifier of claim 2 wherein said pre-selected sequence is further characterized by including one or more filter media packets taken from the list comprising:
 - a) a desiccant - adsorbent package containing within a gross particulate medium envelope therein a quantity of filter medium comprising various types of silica gel, zeolite and/or molecular sieves;
 - b) an adsorbent packet containing within a gross particulate medium envelope therein a filter medium adapted to adsorb sulfur oxides, ozone and other gases, said filter medium comprising packed activated carbon;
 - c) a catalyst packet to break down carbon monoxide, within a gross particulate medium envelope;
 - d) an adsorbent packet containing within a gross particulate medium envelope therein a filter medium adapted to adsorb benzene and other hydrocarbons, said filter medium comprising various types of coconut based activated carbon;
 - e) a HEPA pleated filter; and

- f) a carbon based filter.
- 4. (Previously amended) The air purifier of claim 3 wherein said carbon based filter designated as filter f) therein is a second instance of the type therein designated as filter d).
- 5. (Previously amended) The air purifier of claim 3 wherein said carbon based filter designated as filter f) thereof is a coconut-based carbon impregnated fiber medium.
- 6. (Previously amended) The air purifier of claim 1 further characterized in having an air baffle disposed transversely across said air conduit at a longitudinal position next adjacent to said one or more fans.
- 7. (Previously amended) The air purifier of claim 6 wherein said air baffle is further characterized in having a multiplicity of baffle blades in the form of structures disposed generally coplanar with the direction of air flow through said air conduit, but further comprising one or more bends in the structure of each of said multiplicity of baffle blades, said bends lying along bend lines disposed transversely to said direction of air flow, whereby distal portions of said baffle blades become disposed at pre-selected angles to said direction of air flow.
- 8. (Previously amended) The air purifier of claim 1 wherein said cover is fixedly attached to said main frame near to said air outlet and removably attached to said main frame near to said air inlet.
- 9. (Previously amended) The air purifier of claim 8 wherein said cover is formed of an elastic, airtight material, and additionally includes means for drawing said elastic, airtight material free of said main frame at said removable attachment near to said air inlet of said main frame, and means for drawing said elastic, airtight material in a longitudinal direction towards said air outlet of said main frame, thereby to provide access to the interior of said air conduit.
- 10. (Previously amended) The air purifier of claim 1 wherein said main frame is further characterized in having an elongate, open-topped structure including a bottom plate, two end walls, and two side walls wherein said two end walls at opposite ends thereof are interconnected by said two side walls in an airtight manner, and all of said end walls and said side walls are connected in an airtight manner around the periphery of said bottom plate.
- 11. (Previously amended) The air purifier of claim 10 wherein said cover when fully installed is disposed so as to lay over top edges of said side walls in an airtight relationship.

12. (Previously amended) The air purifier of claim 10 wherein said main frame is further characterized in including two mutually parallel interior walls, disposed parallel to said two side walls at a pre-determined distance inwardly from said two side walls, said side walls having a pre-determined height, and said two interior walls having a pre-determined height that is greater than said height of said side walls.
13. (Previously amended) The air purifier of claim 12 wherein said cover when fully installed is disposed so as to lay over top edges of said interior walls in an airtight relationship.
14. (Previously amended) The air purifier of claim 6 being further characterized in having at least one compressible and airtight air blocking sheet disposed along an edge surface of each said multiplicity of air filters, of said HEPA filter, of said one or more fans, and of said air baffle, said disposition also lying immediately adjacent an inner surface of said cover, whereby inward pressure from said cover will tend to compress the material of said at least one air blocking sheet into any spatial gaps between said inner surface of said cover and said edge surfaces of each of said multiplicity of air filters, of said HEPA filter, of said one or more fans, and of said air baffle, thereby to preclude any air passage there through.
15. (Previously amended) The air purifier of claim 1 wherein said main frame is further characterized in containing at least one battery compartment adaptable to receive and store one or more batteries that are in an electrically connectable relationship with said one or more fans, said at least one battery compartment further being disposed separately from said air conduit in an airtight relationship.
16. (Previously amended) The air purifier of claim 15 wherein each of said at least one battery compartment is separated in an airtight manner from said air conduit by one of said interior walls.
17. (Previously amended) The air purifier of claim 15 being further characterized in having an air flow switch disposed electrically between said one or more batteries and said one or more fans, and being adapted to make or break electrical connection there between at the option of a user.
18. (Previously amended) The air purifier of claim 1 wherein said cover is further characterized in having access means adapted to be opened and closed so as to provide access to said at least one battery compartment at the option of a user.
19. (Previously amended) The air purifier of claim 1 wherein at least one of said multiplicity of air filters comprises a filter media packet.

20. (Previously amended) The air purifier of claim 19 wherein said filter media packet is a packed bed filter media packet.
22. (Previously amended) A method of providing emergency air filtration capability within an air purifier, comprising:
 - a) taking from the clothing of the user an amount of pollutant absorbing thermal insulation material that will fit into a filter media packet;
 - b) providing an empty filter media packet and placing said amount of pollutant absorbing thermal insulation into said filter media packet; and
 - c) placing said filter media packet now containing said amount of pollutant absorbing thermal insulation into said air purifier.
23. (Previously presented) The air purifier of claim 1 further comprising side walls and first and second end walls disposed around the periphery of said air conduit such that said side walls establish the longitudinal extent of said main frame, and said first and second end walls establish the lateral extent of said main frame, wherein said first end wall has a greater length than the longitudinal extent of said main side walls, while said second end wall is shorter than the longitudinal extent of said main walls, whereby the inner surface of said air blocking sheet is placed into forcible contact with said main side walls and first and second end walls, thus to provide a tighter contact between said airtight cover and said main side walls and first and second end walls.